



**CAPITAL**   
**TRANSFORMATION**  
*A Division of Capital Programs*

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# **Green Line Transformation (GLT) Program Update**

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*Angel Peña, Chief of Capital Transformation*

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# Capital Transformation | *A Holistic Approach*



Our transformation program uses an activist management approach to holistically deliver a portfolio of projects that will measurably improve the quality of service for riders. We achieve this by finding synergy and efficiency through strategic sequencing of activities, amplifying the impact of construction windows.



## Future Transformation Programs >>



# Green Line Transformation | *Program Goal*



Improve the Green Line *quality of service for all riders* through strategic investments in Safety & State of Good Repair, Accessible Stations, Legacy Car Replacement and Increased Capacity



# Green Line Transformation | *Program Levels*

**Level 0**

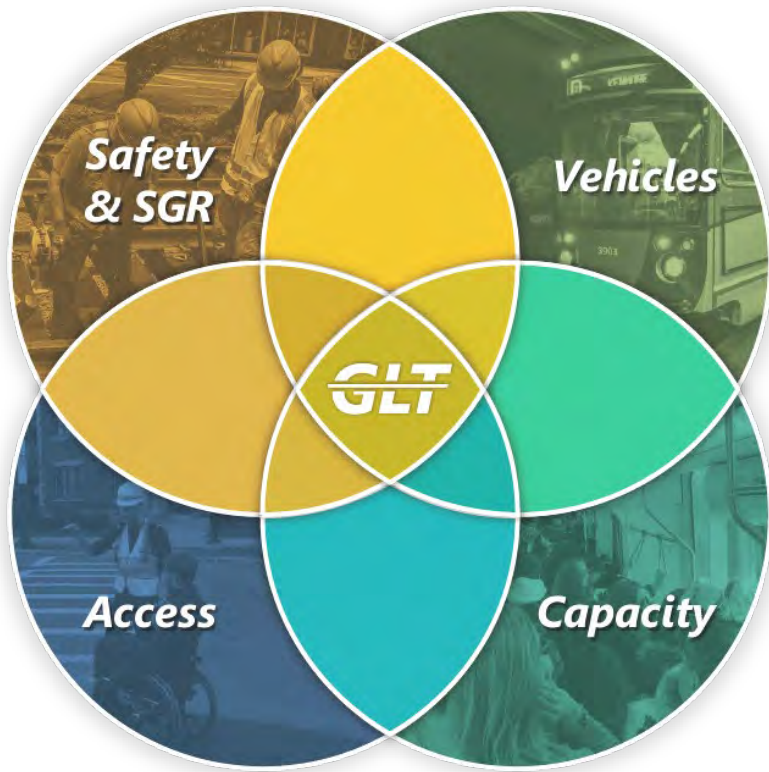
**Improved Safety and State of Good Repair**

- Minimize risk of service disruptions
- Reduce speed restrictions
- Bring assets to state of good repair

**Level 1**

**Enhanced Accessibility**

- New or upgraded platforms
- Compliant height, width & slope
- Barrier-free pathways & wayfinding
- Detectable warning panels



**Level 2**

**Replacement of Legacy Fleets**

Operate and maintain single Type 10s

- More efficient Operations & Maintenance
- 100% of Green Line trains accessible
- More equitable across the Green Line

**Level 3**

**Increased Passenger Capacity**

Additional vehicles and infrastructure for two-car Type 10 operation

- Increase core capacity of subway
- Reduce headways and journey time
- Optimize yards and facilities



# Green Line Transformation | Achievements to Date

**GLT Accomplishments to Date**

**60,500**  
Feet of Track

**30 Units**  
of Special Trackwork

**7.4**  
Route Miles of Signal

**36**  
Intersections

**10+**  
Crosswalks

**2 New**  
Accessible Stations

GLT Program Office Established					
Investment Type	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Level 0 Safety & State of Good Repair (SGR)					
	Track				<div>Fenway Portal</div> <div>Accelerated Track Work on B, C &amp; E Branches</div> <div>Green Line D Branch Track and Signal Replacement</div>
	Structures				<div>Lechmere Viaduct Rehabilitation</div>
Level 1 Accessible Stations					
	Stations				<div>Newton Highlands: Interim Access Improvements</div> <div>Symphony Station 100% Design</div> <div>B Branch Station Consolidation &amp; Accessibility</div>
Level 2 Legacy Car Replacement					
	Vehicles				<div>Specification Development for Type 10 Vehicles</div>

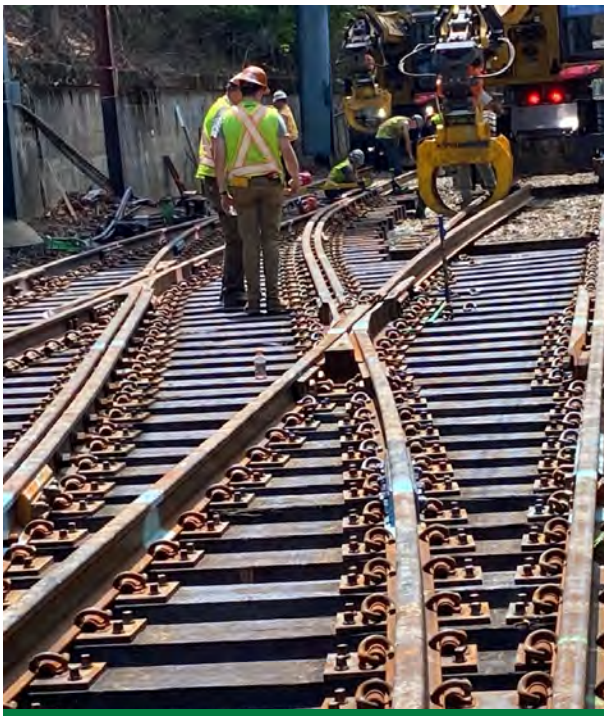


# Level 0 | *Improved Safety and State of Good Repair*

## Upcoming Construction



**Green Line Train Protection System: Vehicle & Signal System Upgrades**

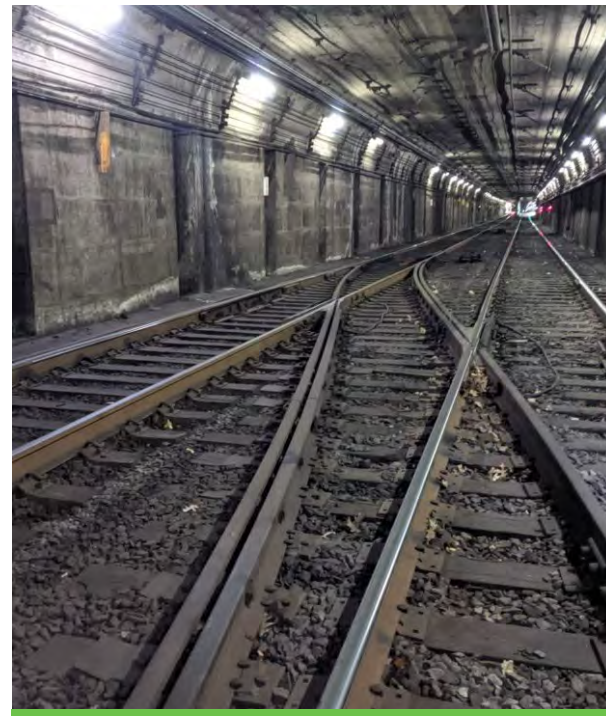


**Track and Intersection Upgrades**

## Advancing Design



**Copley to Arlington Track Replacement**



**Central Tunnel**



# Level 1 | *Enhanced Accessibility*

## Design Underway



**D Branch Station  
Accessibility  
Improvements**



**Symphony Station  
Accessibility  
Improvements**



**Newton Highlands  
Station Accessibility  
Improvements**



**B & C Branch Short-  
term Accessibility  
Improvements**



**Hynes Station  
Accessibility  
Improvements**



## Level 2 | *Replacement of Legacy Fleets*

Before the arrival of new vehicles, key infrastructure upgrades are required.

The procurement of the ***Type 10 Supercar***, will allow retirement of the existing legacy fleets, much of which are beyond their design life, with inaccessible doors.

### Preliminary Design Underway



### Vehicle Maintenance Facility Modifications



Lake St Carhouse & Yard



Reservoir Carhouse & Yard



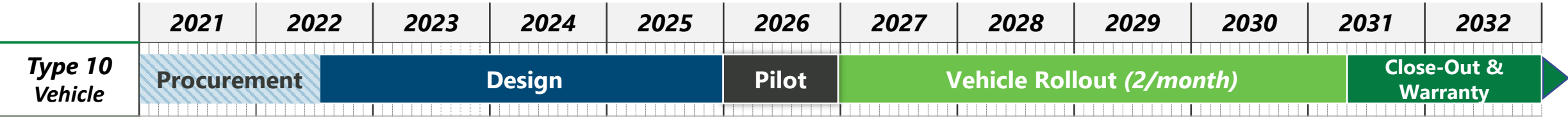
Riverside Carhouse & Yard



GLX Carhouse & Yard

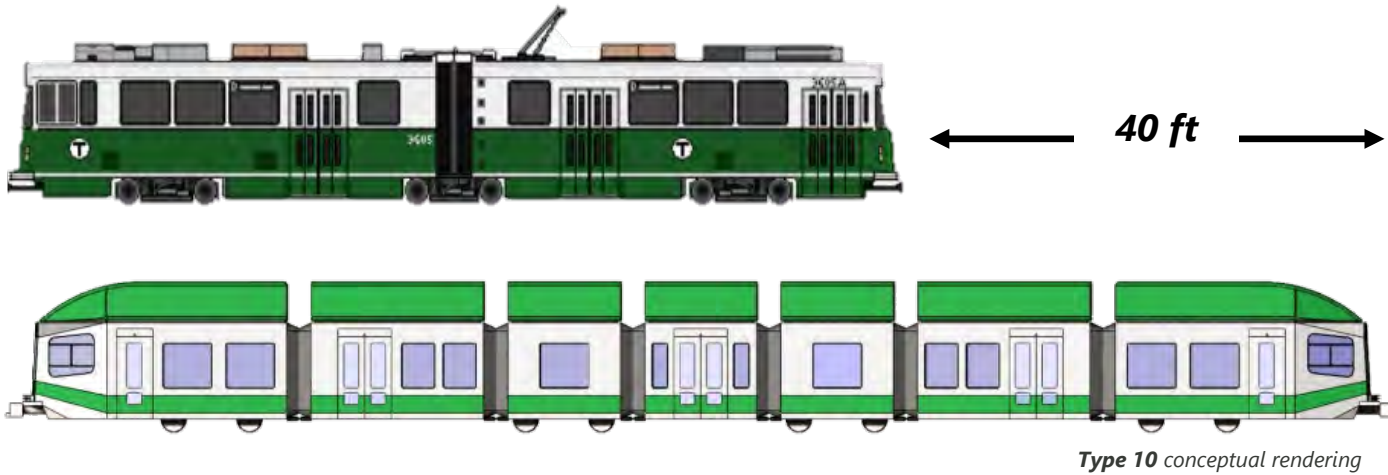


# Level 2 | Type 10 Timeline



- ✓ **Base contract to 102 cars** to allow operation of single supercars
- ✓ **Options were increased** to retain the maximum potential fleet size
- ✓ Vendor **bid proposals** were received
- ✓ Technical Evaluations **Complete**

☐ **SUMMER 2022:** Award Contractor



Type 10 Vehicle - Benefits		
Low Floor	State-of-the-art	Unified Fleet



## Level 3 | *Increase Capacity*

***A key benefit to the Type 10 is being able to increase capacity.*** This is possible with operating them as two-car trains which requires:

- Ensuring platforms are 225 feet long
- Traction power upgrades
- Yards capable of storing enough vehicles to support Peak Service

### ***FTA Core Capacity Grant Program Eligibility with 10% increase***

Letter of  
Intent

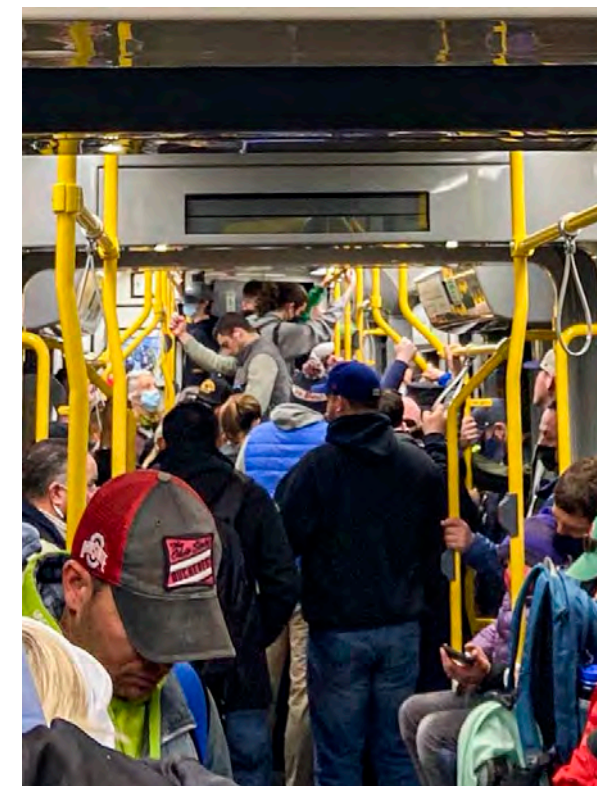
Project Development  
(30% design)

Project  
Engineering

Construction

*The Core Capacity Grant program would **leverage FTA guidance** and **maximize potential funding eligibility***

- ✓ **Letter Requesting Entry has been submitted and accepted**
- ❑ **FTA Review & Response (45 days)**





# Green Line Transformation | *Measurable Outcomes*

## Improved Safety & State of Good Repair

### ***Level 0***

- Risk of train-to train **collisions minimized**
- Risk of train **derailments minimized**
- 100% of stations upgraded to meet **emergency egress standards**

## Enhanced Accessibility

### ***Level 1***

- **Accessible stations** across entire Green Line
- **Passenger circulation** improved at all surface stations
- Score of **90 or better** Plan for Accessible Transportation Infrastructure (PATI)

## Replacement of Legacy Fleets

### ***Level 2***

- 100% of Green Line **trains accessible**
- Improved **Customer Experience** with state-of-the-art technology
- Increased **reliability** for revenue service

## Increased Passenger Capacity

### ***Level 3***

- Increased passenger **capacity**
- Reduced **dwell time** at stations for passenger boarding
- Improved **on-time performance**



# Green Line Transformation | *Diverse Team Behind GLT*





# Connecting with Communities







***MBTA.COM/GLT / GLT@MBTA.COM***